

LAKE MANITOBA AND LAKE ST. MARTIN OUTLET CHANNELS PROJECT
RESPONSE TO IAAC TECHNICAL INFORMATION REQUESTS

Question IAAC-16

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Abbreviations and Acronyms

EIS	environmental impact statement
CCME	Canadian Council of Ministers of the Environment
COPC	Contaminants of Potential Concern
EMP	Environmental Management Program
GCDWQ	Guidelines for Canadian Drinking Water Quality
GWMP	Groundwater Management Plan
MWQSOG	Manitoba Water Quality Standards, Objectives and Guidelines
PAL	Protection of Aquatic Life
PDA	project development area

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EIS Guideline Reference: 5 Engagement with Indigenous Groups and Concerns Raised; 7.1.4 Ground Water and Surface Water; 9.0 Follow-up and Monitoring Programs; 9.2 Monitoring

EIS Reference: 9.5.2.2 Existing Conditions for Human Health Overview; Chapter 10 page 382; 12.4.2.3 Surface Water Quality; 12.4.1.3 Surface Water Quality; 16.3 Key Mitigation Measures and Commitments - Table 16.3-1 page 16.45

Context and Rationale

The EIS Guidelines require the proponent to assess the effects of project activities on human health in terms of drinking and recreational water, including effects related to changes in surface water or ground water quality.

The EIS does not present underlying studies, data or relevant calculations to support or inform the assessment of residual changes to surface water quality and related effects to drinking waters and recreational water. The EIS does not provide sufficient information on the baseline characterization of groundwater quality, especially given the reported exceedance of GCDWQ criteria (i.e. total coliforms in all samples).

Chapter 10 of the EIS (and Vol 5, Section 12.4.1.3) states: "The [surface water quality] monitoring program being developed for the Project area waterways will include the continued collection of surface water samples from regional and local waterways and analyses of a suite of parameters that will provide information on surface water quality in the Project area during Project construction, operation and maintenance activities."

As this plan has not been provided for review, Health Canada is not able to evaluate surface water quality mitigation or monitoring measures for this Project, including key items such as being protective of traditional or recreational land users near the project.

In addition, in Section 12.4.2.3 of the EIS, the proponent proposes a water quality follow-up and monitoring plan that will include a number of parameters which will be compared to Manitoba Water Quality Standards, Objectives and Guidelines (MWQSOGs) for the protection of aquatic life (PAL), Canadian Council of Ministers of the Environment (CCME) guidelines for the protection of freshwater aquatic life, or MWQSOGs or Health Canada guidelines for drinking water. The only criteria Health Canada recognizes as being developed to be protective of human health for drinking water are the Guidelines for Canadian Drinking Water Quality (GCDWQ).

Health Canada notes the EIS does not consider all possible sources of contaminants contributing to the exceedances of thresholds noted in the EIS for TDS, total coliforms, and manganese in groundwater. In addition, Health Canada noted a lack of strong linkage between the assessment of effects to surface water and Contaminants of Potential Concern (COPCs) during sampling programs.

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Without monitoring program/plan details, it is not clear whether or how the Proponent would: monitor for Project-related changes to surface water and ground quality; assess the effectiveness of mitigation measures; link monitoring results to adaptive management; and verify EIS predictions and conclusions.

Information Requests

- a) Provide details of the proposed surface water quality monitoring program, including GCDWQ parameters, and measures to be taken if the findings refute EIS conclusions.
- b) Provide a clear rationale if any parameters or contaminants of potential concerns (COPCs) have been scoped out from the sampling program.
- c) Identify (in table and map format) the proposed surface water locations to be sampled, how often each water body will be sampled, and how traditional knowledge was incorporated into the development of the monitoring plans.
- d) Provide a description of available groundwater samples for LMOC and LSMOC in a table and map format, including depth (e.g. near-surface groundwater samples (Surficial Aquifer) vs. bedrock (Confined Carbonate Aquifer)), and information on reported observations and parameters that exceed the GCDWQ, with consideration of potential sources of well contamination (see the 2019 Guidelines for Canadian Drinking Water Quality: Guideline Technical Document – Manganese. <https://www.canada.ca/en/health-canada/services/publications/healthy-living/guidelines-canadian-drinking-water-quality-guideline-technical-document-manganese.html>)

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a) Project Environmental Management Program and Surface Water Monitoring Plans

The Project Environmental Management Program (EMP) will include surface water monitoring. Please see IAAC-15 for a description of the EMP and associated monitoring plans. Components of the EMP such as environmental compliance monitoring that includes regular site inspection will help to identify unanticipated adverse environmental effects resulting from Project activities, and will enable timely proactive or reactive response in order to avoid, minimize or mitigate these potential effects at a site-specific scale.

Surface Water and Groundwater Monitoring References

The surface water quality monitoring programs will continue to include reference to the Canadian Council of Ministers of the Environment (CCME) and/or Manitoba Water Quality Standards, Objectives and Guidelines (MWQSOG) for protection of aquatic life (PAL), in keeping with the Project surface water quality sampling and monitoring programs implemented as part of Conceptual Design, and the surface water quality sampling and monitoring programs that are ongoing during the Project Preliminary and Detailed Design phases. The Groundwater Management Plan (GWMP) will include associated documentation that addresses groundwater quality monitoring, which will include



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reference to the Guidelines for Canadian Drinking Water Quality (GCDWQ) for samples collected in areas where groundwater is used for drinking water.

- b) The EMP currently under development by Manitoba Infrastructure will include a Monitoring Program that explicitly identifies the rationale, methods, parameters, sampling locations and sampling schedule for the surface water quality and groundwater quality monitoring programs. The final list of parameters and locations to be included in the monitoring plans will be determined through the ongoing Indigenous consultation and engagement program, and as the detailed design for the Project advances.
- c) Please see the response to IAAC-13, which provides a description of the Project surface water quality sampling and monitoring programs and plans, including maps showing sampling locations. As identified in the Indigenous Consultation Approach and Current Status report (Volume 1, Appendix 5C of the EIS), the contents and implementation of the EMP and the associated monitoring plans will be discussed in detail with potentially affected Indigenous groups to provide them with an opportunity to provide input and feedback.
- d) Available Groundwater Samples for LMOC and LSMOC

Please see IAAC-26 for information on the methods, analyses and results of groundwater sampling in the project development area (PDA).